## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Inventorship ..... Sullivan et al.
Applicant ..... Microsoft Corp.
Group Art Unit ..... 2621
Examiner ..... Czekaj
Attorney's Docket No. ..... MS1-601US
Title: "An Application Program Interface (API) Facilitating Decoder Control of Accelerator Resources"

# APPEAL BRIEF

To: Commissioner for Patents
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Pursuant to 37 C.F.R. §41.37, Applicant hereby submits an appeal brief for application 09/839,679, filed April 20, 2001, within the requisite time from the date of filing the Notice of Appeal. Accordingly, Applicant appeals to the Board of Patent Appeals and Interferences seeking review of the Examiner's rejections.

## (1) Real Party in Interest

The real party in interest is Microsoft Corporation, the assignee of all right, title and interest in and to the subject invention.

## (2) Related Appeals and Interferences

Appellant is not aware of any other appeals, interferences, or judicial proceedings which will directly affect, be directly affected by, or otherwise have a bearing on the Board's decision to this pending appeal.

## (3) Status of Claims

Claims 1-25 stand rejected and are pending in the Application. Claims 1-25 are set forth in the Appendix of Appealed Claims on page 23.

## (4) Status of Amendments

A final Office Action, dated January 24, 2007, was sent by the Office.

A response to the final Office Action was filed April 16, 2007. The response included proposed amendments for claims 10-12.

A Notice of Appeal was filed on April 20, 2007.

An Advisory, dated June 5, 2007, was sent by the Office. In the Advisory Action, the Office indicated that the proposed amendments in the response (filed April 16, 2007) would not be entered because they were not deemed to place the application in better form for appeal.

## (5) Summary of Claimed Subject Matter

A concise explanation of each of the independent claims is included in this Summary section, including specific reference characters, if any. These specific reference characters are examples of particular elements of the drawings for certain embodiments of the claimed subject matter and the claims are not limited to solely the elements corresponding to these reference characters.

With regard to claim 1, a method comprising: receiving a command from a decoder application (Fig. 2 (160A-N)) at an application program interface (API) (Fig. 2 (104)), wherein the API is configured to facilitate the use of a plurality of different multimedia accelerators (Fig. 2 (174A-N)) with the decoder application (Page 15, lines 2-18; Fig. 2 (104, 160A-N, 174 A-N)); and generating one or more filter control command data structures (Fig. 2 (204); Page 52, line 19 through page 53, line 2; Fig. 3 (300)), recognizable by a communicatively coupled accelerator including one or more parameters which, when received by the accelerator, affects one or more filter settings of the accelerator based, at least in part, on the content of the received command (Page 23, lines 9-25; Fig. 2 (204)).

With regard to claim 12, a storage medium (Fig. 10 (1000)) comprising a plurality of executable instructions (Fig. 10 (1002)) which, when executed, implement an application program interface (API) (Fig. 10 (1004)) to dynamically generate one or more filter control command data structures in response to a command received from a decoder application (Fig. 2 (204); Page 52, line 19 through page 53, line 2; Fig. 3 (300)), wherein the one or more filter control command data structure(s) include one or more parameters which, when received by a communicatively coupled accelerator, effect one or more filter settings on the

accelerator in accordance with the received command (Page 23, lines 9-25; Fig. 2 (204); Page 62, lines 1-16; Fig. 10 (1000-1004)), wherein the API is not specific to any particular multimedia application and/or multimedia accelerator (Page 62, lines 11-12; page 15, lines 17-18).

With regard to claim 18, a computing system comprising: a decoder application (Fig. 2 (160 A-N)) to process received media content; and an operating system (Fig. 1 (158)) including an application program interface (API) (Fig. 1 (104); Fig 2 (104)), support the media processing, wherein the API generates one or more filter control commands including one or more parameters (Fig. 2 (204); Page 52, line 19 through page 53, line 2; Fig. 3 (300)) which, when received by a communicatively coupled media processing accelerator, effect one or more filter settings of the accelerator in accordance with a command received from the decoder (Page 23, lines 9-25; Fig. 2 (204)), wherein the decoder application is configured to iteratively issue configuration commands (Page 55, lines 1-4; Fig. 5 (502)) reflecting various alternative degrees and methods of decoding acceleration capability until choosing one that is acceptable to both the decoder application and the accelerator (Page 55, lines 1-10; Fig. 5 (502-508)).

## (6) Grounds of Rejection to be Reviewed on Appeal

Claims 10-12 stand rejected under 35 U.S.C. § 101 "because the claims do not meet the 35 U.S.C. requirements (the claims have improper language regarding the storage medium)."

Claims 1-25 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,744,472 to MacInnis in view of U.S. Patent No. 6,725,279 to Sriram.

## (7) Argument

### A. The rejections under 35 U.S.C. §101 fail because the Office has failed to establish a *prima facie* case of unpatentability.

Applicant respectfully submits that the Office has not established a *prima facie* case of unpatentability. Specifically, the Office has not identified or explained why claims 10-12 are directed to an abstract idea with no practical application. Instead, the Office has merely stated that the claims are rejected "because the claims do not meet the 35 U.S.C. 101 requirements (the claims have improper language regarding the computer-readable media)." The Office then directs the Applicant's attention to the USPTO Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility Annex IV".

Accordingly, the Office has provided no explanation or justification for this rejection. Applicant respectfully reminds the Office that the Office has the burden of setting forth a *prima facie* case of unpatentability. (see e.g. MPEP 2106 IV(C)(3)(D)). In this regard, this section of the MPEP makes it clear that it is only after the Office is able to "identify and explain in the record the reasons why a claim is for an abstract idea with no practical application" that "the burden shifts to the applicant to either amend the claim or make a showing of why the claim is eligible for patent protection." (Id.). Applicant respectfully submits that simply stating that the claims are rejected "because the claims do not meet the 35 U.S.C.

101 requirements" simply reiterates that the claims are rejected and fails to identify or explain why the claim is rejected. Accordingly, Applicant respectfully requests that these rejections be withdrawn.

**B. The rejections under 35 U.S.C. §103(a) over MacInnis and Sriram fail because the Office has failed to establish a *prima facie* case of obviousness.**

Applicant respectfully submits that the Office has not established a *prima facie* case of obviousness. The discussion below proceeds as follows. First, a section entitled "The § 103 Standard" is provided which describes the criteria that must be met in order to establish a *prima facie* case of obviousness. Second, a section entitled "The Claims" is provided which presents Applicant's reasoning as to why the Office has not met these criteria.

**The §103 Standard**

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, ***there must be some suggestion or motivation***, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, ***to modify the reference or to combine reference teachings***. Second, there must be a reasonable expectation of success. Finally, ***the prior art reference (or references when combined) must teach or suggest all the claim limitations***. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

**The Claims**

**Claim 1** recites a method comprising:

- receiving a command from a decoder application at an application program interface (API), wherein the API is configured to facilitate the use of a plurality of different multimedia accelerators with the decoder application; and
- generating one or more filter control command data structures, recognizable by a communicatively coupled accelerator including one or more parameters which, when received by the accelerator, affects one or more filter settings of the accelerator based, at least in part, on the content of the received command.

In making out the rejection of this claim, the Office argues that its subject matter is rendered obvious in view of MacInnis and Sriram. Specifically, the Office relies on Fig. 2 (item 50) of MacInnis for disclosing "receiving a command from a decoder application." In this regard, the Office argues "the decoder application is the video decoder". The Office then relies on Fig. 2 and Column 57 (lines 21-37) of MacInnis as disclosing "generating one or more filter control command data structures, recognizable by a communicatively coupled accelerator including one or more parameters which, when received by the accelerator, affects one or more filter settings of the accelerator". In this regard, the Office argues "the filter parameters are the blending, scaling, blitting, and filling, [and] the accelerator is the graphics accelerator." Unfortunately, the Office does not address the claim language "based, at least in part, on the content of the received command". Finally, while the Office argues that MacInnis inherently discloses an application interface that would be necessary for it to correctly operate, it nevertheless relies on Columns 4 (lines 48-54), 7 (lines 10-14) and 8 (lines 1-14)

of Sriram for disclosing an API that is "configured to facilitate the use of a plurality of different multimedia accelerators with the decoder application". The Office argues that one would have been motivated to combine the teachings of these references "in order to obtain an apparatus that is more versatile by being able to perform complex operations."

Applicant respectfully traverses this rejection and submits that the Office has not established a *prima facie* case of obviousness.

First, Applicant submits that the references do not collectively disclose all of the subject matter of this claim. For example, Applicant fails to understand how Item 50 in Fig. 2 of MacInnis (labeled "Video Decoder") discloses or suggests "receiving a command from a decoder application..." as claimed. Instead, as far as Applicant can discern, Item 50 simply discloses a video decoder component of an integrated circuit (integrated circuit 10) that receives video signals which it digitizes and processes into a format that can be used by a video scaler. As such, Applicant is left without any explanation as to how Item 50 in MacInnis is relevant to the claimed subject matter.

Furthermore, it appears that the Office has forgotten the claim language "...based, at least in part, on the content of the received command." As such, the Office's reliance on the Graphics Accelerator 64 in MacInnis is misplaced because nothing indicates "...one or more parameters which, when received by the accelerator, affects one or more filter settings of the accelerator ***based, at least in part, on the content of the received command***." (emphasis added). Indeed, the only commands that are received by the accelerator in MacInnis appear to be commands it receives directly from a CPU (see Fig. 37 and Column 57 (lines 46-

47). As such, Applicant is left without any explanation as to how the Graphics Accelerator 64 in MacInnis is relevant to the claimed subject matter.

In addition, the *integrated* circuit system of MacInnis simply does not inherently disclose an application interface (API) that would be necessary for it to correctly operate, as the Office contends. In this regard, Sriram does not disclose or suggest an API that is configured to "facilitate the use of a plurality of different multimedia accelerators with the decoder application" as claimed. Instead, the monitor processor in Sriram is part of the decoder's system memory and is merely responsible for splitting picture decoding into multiple sub-processes based upon one of two schemes to maximize scalability and efficiency (see e.g. Sriram, Column 7, lines 49-50 and Column 8, lines 19-21).

Second, the Office's stated motivation "to obtain an apparatus that is more versatile by being able to correctly and effectively facilitate the use between multiple processors in a system" is too general and could serve as the basis for making ***any*** modification to MacInnis. Furthermore, this stated motivation is simply inapplicable to MacInnis which is directed to a graphics integrated circuit chip for controlling a television display which includes a bus to communicate with peripheral components on a system, such as a CPU. (e.g., see MacInnis Column 3 (lines 40-45)). In other words, the Office's stated motivation is simply not germane to MacInnis which is concerned with specific operations which are unrelated to facilitating the use between multiple processors in a system. Accordingly, Applicant respectfully submits that that a person of ordinary skill in the art, having common sense at the time of the invention, would not have

reasonably looked to Sriram to solve a problem that is not applicable or relevant to MacInnis.

Third, modifying the integrated chip structure of MacInnis with the hierarchically regimented decoding system of Sriram would impermissibly render MacInnis unsatisfactory for its intended purpose (see MPEP 2143.01). Specifically, and by way of example and not limitation, MacInnis is directed to a graphics display system that "accepts video input signals that include ***analog*** video signals..." (e.g., see MacInnis, Column 3 (lines 49-50)) (emphasis added). In this regard, the video decoder of MacInnis (see MacInnis Fig. 2, item 50) is specifically configured to process ***analog*** video signals. In contrast, the system of Sriram is limited to processing ***digital*** video signals that are in MC (motion compensation) - DCT (discrete cosine transform) format. As such, modifying MacInnis with the system of Sriram would appear to render MacInnis unsatisfactory for its intended purpose of providing a graphics display system accepting both analog and digital video signals. Accordingly, Applicant respectfully submits that that a person of ordinary skill in the art, having common sense at the time of the invention, would not have reasonably modified MacInnis with the teachings of Sriram because doing so would have rendered MacInnis incapable of accepting "video input signals that include ***analog*** video signals..."

In view of the above discussion, the Office has not established a *prima facie* case of obviousness. Accordingly, for at least this reason, Applicant traverses this rejection and submits that this claim is allowable.

**Claims 2-11** depend from claim 1 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited

features which, in combination with those recited in claim 1, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

In addition, regarding claim 3, the Office argues that Fig. 28 of MacInnis discloses "wherein the filter is a post-processing filter." Applicant, after reviewing Fig. 28, fails to see how this subject matter is disclosed or suggested. Specifically, Fig. 28 deals with blending by the video compositor, not the accelerator. (see e.g. MacInnis, Column 44, lines 23-38 and Fig. 2). Accordingly, Applicant submits that the Office's reliance on this figure is misplaced.

In addition, regarding claim 4, the Office argues that the subject matter of this claim is disclosed on Column 4 (lines 29-31) of Richter. Furthermore, the Office states that "filters and prediction references are well known within the environment of encoders and decoders". Applicant respectfully disagrees. First, this excerpt simply does not disclose: "wherein output data subsequent to the application of a post-processing filter are used as prediction references", as claimed. Second, the Office has not substantiated its claim that filters and prediction references were well known. This excerpt from Column 4 is reproduced below for the Office's convenience:

> This architecture is particularly used to implement very complex multimedia processing configurations using, for example, echo suppressors or encoding or decoding blocks with a very simple application interface.

In addition, regarding claims 6-7, the Office cites Column 4 (lines 40-51) of MacInnis and argues: "the strength parameter is the scaling". Applicant

respectfully disagrees and submits that the Office has mischaracterized the MacInnis reference. Specifically, this cited excerpt merely discusses a video scaler that is responsible for scaling video stream input. This simply has nothing to do, whatsoever, with "a strength parameter to control an amount of filter applied by a receiving filter" or any other parameter(s) "which, when received by the accelerator, affects one or more filter settings of the accelerator", as claimed.

Furthermore, even if "the strength parameter was the scaling", which it is not, the Office appears to have forgotten that it relies (albeit inappropriately) on the "blending, scaling, blitting, and filling" of MacInnis's ***graphics accelerator, not its video scaler***, for disclosing "the filter parameters". As such, the scaling performed by the video scaler in MacInnis could not possibly disclose the strength parameter recited in this claim. In addition, even a cursory glance at Fig. 2 of MacInnis illustrates that the Video Scaler 52 is completely separate from the accelerator 64 and performs a completely different function(s).

**Claim 12** recites one or more computer-readable media having computer-readable instructions stored thereon which, when executed by a computer, implement an application program interface (API) to dynamically generate one or more filter control command data structures in response to a command received from a decoder application, wherein the one or more filter control command data structure(s) include one or more parameters which, when received by a communicatively coupled accelerator, effect one or more filter settings on the accelerator in accordance with the received command, wherein the API is not specific to any particular multimedia application and/or multimedia accelerator.

In making out the rejection of this claim, the Office relies on the same argument it proffered in rejecting claim 1. Applicant respectfully traverses this rejection and submits that the Office has not established a *prima facie* case of obviousness.

First, Applicant submits that the references do not collectively disclose all of the subject matter of this claim. For example, Applicant fails to understand how Item 50 in Fig. 2 of MacInnis (labeled "Video Decoder") discloses or suggests "a command received from a decoder application" as claimed. Instead, as far as Applicant can discern, Item 50 simply discloses a video decoder component of an integrated circuit (integrated circuit 10) that receives video signals which it digitizes and processes into a format that can be used by a video scaler. As such, Applicant is left without any explanation as to how Item 50 in MacInnis is even relevant to the claimed subject matter.

Furthermore, it appears that the Office has forgotten the claim language "...in accordance with the received command". As such, the Office's reliance on the Graphics Accelerator 64 in MacInnis is misplaced because nothing indicates "wherein the one or more ***filter control command data structure(s)*** include one or more parameters which, when received by a communicatively coupled accelerator, effect one or more filter settings on the accelerator ***in accordance with the received command***". (emphasis added). Indeed, as noted above, the only commands that are received by the accelerator in MacInnis appear to be commands it receives directly from a CPU. As such, Applicant is left without any explanation as to how the Graphics Accelerator 64 in MacInnis is relevant to the claimed subject matter.

In addition, the Office appears to have forgotten the claim language "...in response to a command received from a decoder application". As such, the Office's reliance on Fig. 2 and Column 57 (lines 21-37) of MacInnis is misplaced because even if the is excerpt did disclose "one or more filter control command data structures", which it does not, nothing indicates that that a structure is generated in response to a command received from a decoder application. Indeed, as noted above, the only commands that MacInnis indicates are received by the accelerator are commands it receives directly from a CPU. As such, Applicant is left without any explanation as to how Fig. 2 and Column 57 (lines 21-37) of MacInnis are relevant to the claimed subject matter.

Finally, as noted above, the *integrated* circuit system of MacInnis simply does not inherently disclose an application interface (API) that would be necessary for it to correctly operate, as the Office contends. Furthermore, in this regard, Sriram does not disclose or suggest an API that is configured to "facilitate the use of a plurality of different multimedia accelerators with the decoder application" as claimed. Instead, the monitor processor in Sriram is part of the decoder's system memory and merely splits picture decoding into multiple sub-processes.

Second, as noted above, the Office's stated motivation "to obtain an apparatus that is more versatile by being able to correctly and effectively facilitate the use between multiple processors in a system" is too general and could serve as the basis for making ***any*** modification to MacInnis. Furthermore, this stated motivation is not even applicable to MacInnis which is directed to a graphics integrated circuit chip for controlling a television display which includes a bus to communicate with peripheral components on a system, such as a CPU.

Accordingly, Applicant respectfully submits that that a person of ordinary skill in the art, having common sense at the time of the invention, would not have reasonably looked to Sriram to solve a problem that is not applicable or relevant to MacInnis.

Third, as noted above, modifying the integrated chip structure of MacInnis with the hierarchically regimented decoding system of Sriram would impermissibly render MacInnis unsatisfactory for its intended purpose of providing a graphics display system accepting analog video signals. Accordingly, Applicant respectfully submits that that a person of ordinary skill in the art, having common sense at the time of the invention, would not have reasonably modified MacInnis wit the teachings of Sriram because doing so would have rendered MacInnis incapable of accepting "video input signals that include analog video signals..."

In view of the above discussion, the Office has not established a *prima facie* case of obviousness. Accordingly, for at least this reason, Applicant traverses this rejection and submits that this claim is allowable.

**Claims 13-17** depend from claim 12 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 12, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

In addition, regarding claim 17, the Office cites Column 4 (lines 40-51) of MacInnis and argues: "the strength parameter is the scaling". Applicant respectfully disagrees and submits that the Office has mischaracterized the

MacInnis reference. Specifically, this excerpt merely discusses a video scaler that is responsible for scaling video stream input. This simply has nothing to do, whatsoever, with "a strength parameter to control an amount of filter applied by a receiving filter" or any other parameter(s) "which, when received by the accelerator, affects one or more filter settings of the accelerator", as claimed.

Furthermore, even if "the strength parameter was the scaling", which it is not, the Office appears to have forgotten that it relies (albeit inappropriately) on the "blending, scaling, blitting, and filling" of MacInnis's ***graphics accelerator, not its video scaler***, for disclosing "the filter parameters". As such, the scaling performed by the video scaler in MacInnis could not possibly disclose the strength parameter recited in this claim. In addition, even a cursory glance at Fig. 2 of MacInnis illustrates that the Video Scaler 52 is completely separate from the Graphics Accelerator 64 and performs a completely different function(s).

**Claim 18** recites a computing system comprising:

- a decoder application to process received media content; and
- an operating system including an application program interface (API), support the media processing, wherein the API generates one or more filter control commands including one or more parameters which, when received by a communicatively coupled media processing accelerator, effect one or more filter settings of the accelerator in accordance with a command received from the decoder, wherein the decoder application is configured to iteratively issue configuration commands reflecting various alternative degrees and methods of decoding acceleration capability until choosing one that is acceptable to both the decoder application and the accelerator.

In making out the rejection of this claim, the Office relies on the same argument it proffered in rejecting claim 1. In addition, the Office argues that

Columns 5 (lines 58-67) and 12 (lines 59-63) of Sriram disclose "wherein the decoder application is configured to iteratively issue configuration commands reflecting various alternative degrees and methods of decoding acceleration capability until choosing one that is acceptable to both the decoder application and the accelerator".

Applicant respectfully traverses this rejection and submits that the Office has not established a *prima facie* case of obviousness.

First, as discussed above, Applicant submits that the references do not collectively disclose all of the subject matter of this claim. For example, Applicant fails to understand how Item 50 in Fig. 2 of MacInnis (labeled "Video Decoder") discloses or suggests "a command received from a decoder application" as claimed. Instead, as far as Applicant can discern, Item 50 simply discloses a video decoder component of an integrated circuit (integrated circuit 10) that receives video signals which it digitizes and processes into a format that can be used by a video scaler. As such, Applicant is left without any explanation as to how Item 50 in MacInnis is even relevant to the claimed subject matter.

Furthermore, it appears that the Office has forgotten the claim language "... in accordance with a command received from the decoder". As such, the Office's reliance on the Graphics Accelerator 64 in MacInnis is misplaced because nothing indicates "... one or more filter control commands including one or more parameters which, when received by a communicatively coupled media processing accelerator, effect one or more filter settings of the accelerator ***in accordance with a command received from the decoder***. (emphasis added). Indeed, as noted above, the only commands that are received by the accelerator are commands it

receives directly from a CPU. As such, Applicant is left without any explanation as to how the Graphics Accelerator 64 in MacInnis is relevant to the claimed subject matter.

In addition, with respect to Columns 5 and 12 of Sriram, Applicant submits that the Office has mischaracterized these excerpts. Specifically, these portions simply have nothing to do with a decoder application that is "configured to iteratively issue configuration commands reflecting various ***alternative degrees and methods of decoding acceleration capability until choosing one that is acceptable to both the decoder application and the accelerator.***" (emphasis added). These excerpts are reproduced below for the Office's convenience:

> Data structures are one component of the invention. Data structures for different block communication and parameter passing have been chosen according to the bit stream hierarchy. Several factors were considered in determining the organization of these parameters. Some of the factors are: (1) implementing video decoding using multiple processes efficiently; (2) efficient argument passing between different compute blocks; (3) computational efficiency; (4) efficient data flow (minimal data replication); and (5) good data cache effects.
>
> Any given processing unit (for example, Motion Compensation) needs only a subset of these parameters. A Macroblock structure is defined in such a way that all the parameters needed for Macroblock processing can be found in the MB data structure.

The Office's only argument with respect to these excerpts is to state "wherein the configuration commands is the parameter passing". Applicant respectfully submits that this explanation is insufficient because it fails to account for all of the language of this claim element (i.e., the Office's explanation ignores "...reflecting various alternative degrees and methods of decoding acceleration

capability until choosing one that is acceptable to both the decoder application and the accelerator.".)

Finally, as noted above, the *integrated* circuit system of MacInnis simply does not inherently disclose an application interface (API) that would be necessary for it to correctly operate, as the Office contends. Furthermore, in this regard, Sriram does not disclose or suggest an API that is configured to "facilitate the use of a plurality of different multimedia accelerators with the decoder application" as claimed. Instead, the monitor processor in Sriram is part of the decoder's system memory and merely splits picture decoding into multiple sub-processes.

Second, as noted above, the Office's stated motivation "to obtain an apparatus that is more versatile by being able to correctly and effectively facilitate the use between multiple processors in a system" is too general and could serve as the basis for making any modification to MacInnis. Furthermore, this stated motivation is not even applicable to MacInnis which is directed to a graphics integrated circuit chip for controlling a television display which includes a bus to communicate with peripheral components on a system, such as a CPU. Accordingly, Applicant respectfully submits that that a person of ordinary skill in the art, having common sense at the time of the invention, would not have reasonably looked to Sriram to solve a problem that is not applicable or relevant to MacInnis.

Third, as noted above, modifying the integrated chip structure of MacInnis with the hierarchically regimented decoding system of Sriram would impermissibly render MacInnis unsatisfactory for its intended purpose of providing a graphics display system accepting both analog and digital video

signals. Accordingly, Applicant respectfully submits that that a person of ordinary skill in the art, having common sense at the time of the invention, would not have reasonably modified MacInnis wit the teachings of Sriram because doing so would have rendered MacInnis incapable of accepting "video input signals that include analog video signals…"

In view of the above discussion, the Office has not established a *prima facie* case of obviousness. Accordingly, for at least this reason, Applicant traverses this rejection and submits that this claim is allowable.

**Claims 19-25** depend from claim 18 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 18, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

In addition, regarding claim 20, the Office argues that Fig. 28 of MacInnis discloses "wherein the filter is a post-processing filter." Applicant, after reviewing Fig. 28, fails to see how this subject matter is disclosed or suggested. Specifically, Fig. 28 deals with blending by the video compositor, not the accelerator. Accordingly, Applicant submits that the Office's reliance on this figure is misplaced.

In addition, regarding claim 23, the Office cites Column 4 (lines 40-51) of MacInnis and argues "the strength parameter is the scaling". Applicant respectfully disagrees and submits that the Office has mischaracterized the MacInnis reference. Specifically, this excerpt merely discusses a video scaler that is responsible for scaling video stream input. This simply has nothing to do,

whatsoever, with "a strength parameter to control an amount of filter applied by a receiving filter" or any other parameter(s) "which, when received by the accelerator, affects one or more filter settings of the accelerator", as claimed.

Furthermore, even if "the strength parameter was the scaling", which it is not, the office appears to have forgotten that it relies (albeit inappropriately) on the "blending, scaling, blitting, and filling" of MacInnis's ***graphics accelerator, not its video scaler***, for disclosing "the filter parameters". As such, the scaling performed by the video scaler in MacInnis could not possibly disclose the strength parameter recited in this claim. In addition, even a cursory glance at Fig. 2 of MacInnis illustrates that the Video Scaler 52 is completely separate from the Graphics Accelerator 64 and performs a completely different function(s).

**Conclusion**

The Office has failed to establish a *prima facie* case of obviousness. Accordingly, Applicant respectfully requests that the rejections be overturned and that the pending claims be allowed to issue.

Respectfully Submitted,

Dated: 6/25/2007 By: _____

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## (8) Appendix of Appealed Claims

1. (Previously Presented) A method comprising:

receiving a command from a decoder application at an application program interface (API), wherein the API is configured to facilitate the use of a plurality of different multimedia accelerators with the decoder application; and

generating one or more filter control command data structures, recognizable by a communicatively coupled accelerator including one or more parameters which, when received by the accelerator, affects one or more filter settings of the accelerator based, at least in part, on the content of the received command.

2. (Original) A method according to claim 1, further comprising:

passing the generated filter control command data structures to the accelerator, wherein the accelerator modifies one or more filter settings in accordance with the parameters embedded within the data structure.

3. (Original) A method according to claim 1, wherein the filter is a post-processing filter.

4. (Original) A method according to claim 3, wherein output data subsequent to the application of a post-processing filter are used as prediction references for decoding subsequent data.

**5.** (Original) A method according to claim 3, wherein the post-processing filter is one or more of a deblocking filter, a de-ringing filter, and the like.

**6.** (Original) A method according to claim 1, wherein the parameters include a strength parameter.

**7.** (Original) A method according to claim 6, wherein the generated data structure includes a strength parameter for each of one or more block boundaries of a frame.

**8.** (Original) A method according to claim 1, wherein the API issues filter control commands for each of a number of edges of luminance and chrominance blocks of received media content.

**9.** (Original) A method according to claim 1, wherein the API issues macroblock filter control command data structures for each macroblock of video picture content, each macroblock filter control command comprising four (4) or sixteen (16) luminance block filter control command data structures for controlling the filtering of the luminance blocks of the macroblock, and/or two (2), four (4), eight (8), sixteen (16), or thirty-two (32) chrominance block filter control command data structures for controlling the filtering of the chrominance blocks of the macroblock.

**10.** (Previously Presented) One or more computer-readable media having computer-readable instructions stored thereon which, when executed by a computer, implement a method according to claim 1.

**11.** (Previously Presented) A system comprising:

one or more computer-readable media; and

computer-readable instructions on the one or more computer-readable media which, when executed by one or more processors, implement a method according to claim 1.

**12.** (Previously Presented) One or more computer-readable media having computer-readable instructions stored thereon which, when executed by a computer, implement an application program interface (API) to dynamically generate one or more filter control command data structures in response to a command received from a decoder application, wherein the one or more filter control command data structure(s) include one or more parameters which, when received by a communicatively coupled accelerator, effect one or more filter settings on the accelerator in accordance with the received command, wherein the API is not specific to any particular multimedia application and/or multimedia accelerator.

**13.** (Original) A storage medium according to claim 12, wherein the filter control command data structure(s) effect one or more post processing filter(s) of the accelerator.

**14.** (Original) A storage medium according to claim 12, wherein the filter control command data structure(s) effect one or more of a deblocking filter(s), de-ringing filter(s), and/or another post processing filter of the accelerator.

**15.** (Original) A storage medium according to claim 12, wherein the API issues a filter control command data structure for each of a number of edges of luminance and chrominance blocks of received media content.

**16.** (Original) A storage medium according to claim 15, wherein the API issues four (4) filter control command data structures for each luminance block, and/or two (2) filter control command data structure(s) for each chrominance block.

**17.** (Original) A storage medium according to claim 12, wherein the parameter(s) include a filter strength parameter.

**18.** (Previously Presented) A computing system comprising:

a decoder application to process received media content; and

an operating system including an application program interface (API), support the media processing, wherein the API generates one or more filter control commands including one or more parameters which, when received by a communicatively coupled media processing accelerator, effect one or more filter settings of the accelerator in accordance with a command received from the

decoder, wherein the decoder application is configured to iteratively issue configuration commands reflecting various alternative degrees and methods of decoding acceleration capability until choosing one that is acceptable to both the decoder application and the accelerator.

**19.** (Original) A computing system according to claim 18, further comprising:

one or more media processing accelerator(s), communicatively coupled to the decoder application via the API, including one or more filter(s) responsive to the filter control command data structures reflecting information received in the command from the decoder.

**20.** (Original) A computing system according to claim 19, wherein the filter(s) are post processing filters.

**21.** (Previously Presented) A computing system according to claim 19, wherein the filter(s) include one or more of a deblocking filter and de-ringing filter.

**22.** (Original) A computing system according to claim 18, wherein the API issues macroblock filter control command data structures for each macroblock of video picture content, each macroblock filter control command comprising four (4) or sixteen (16) luminance block filter control command data structures for controlling the filtering of the luminance blocks of the macroblock, and/or two (2), four (4), eight (8) , sixteen (16) or thirty-two (32) chrominance block filter control command data structures for controlling the filtering of the chrominance blocks of the macroblock.

**23.** (Original) A computing system according to claim 18, wherein the filter control command data structures include a strength parameter to control an amount of filter applied by a receiving filter.

**24.** (Original) A computing system according to claim 18, further comprising:

a storage medium having stored therein a plurality of executable instructions; and

an execution unit, coupled to the storage medium, to execute at least a subset of the plurality of executable instructions to implement the operating system and associated API.

**25.** (Original) A computing system according to claim 24, wherein the execution unit executes at least a subset of the plurality of executable instructions to implement the decoder application.

**(9) Evidence appendix. None**

**(10) Related proceedings appendix. None**